REMARKS/ARGUMENTS

The amendments and remarks presented herein attend to all outstanding issues in the pending non-final Office Action of December 23, 2003. Claims 1-39 remain pending in this application. Claims 15, 19, 20, 31, 34, 36 and 37 are amended.

Priority

1. The Examiner requested a certified copy of Applicant's foreign priority document filed "1/24/02". Applicant believes the Examiner is referring to PCT/US02/01858 filed 1/22/02. A certified copy of this document is attached herewith and the specification has been amended to recite the PCT serial number.

Rejections under 35 U.S.C. §102(e)

2, 3. Claims 1-7, 9-20, 22-29, and 31-38 stand rejected under 35 U.S.C. §102(e) as being anticipated by United States Patent No. 6,027,075 granted to Petrenko (hereinafter "Petrenko '075").

To anticipate a claim, Petrenko '075 must teach every element of the claim and "the identical invention must be shown in as complete detail as contained in the ... claim." *MPEP 2131* citing *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989). Petrenko '075 does not teach every element of claims 1-7, 9-20, 22-29, and 31-38.

In one aspect, (1) Petrenko '075 teaches a method of modifying ice adhesion strength between ice and an object by applying a DC bias to an interface between the ice and the object, but this is an electrostatic repulsion, not melting as is presently claimed. In another aspect, (2) Petrenko '075 teaches a system wherein an object is coated with ferroelectric material that is heated by an AC electromagnetic field, as shown in the concentric layering of Fig. 27. The ferrolectric surface proximate electrode is not the outer surface where melting occurs. This outer surface is remote from the electrical conductor, and so claim 1 also distinguishes this embodiment.

Claim 1, one the other hand, recites a system for de-icing a surface of a cableway system component, and requires the following elements:

a) an electrical conductor proximate to the surface, and
b) an AC power source for providing a high-frequency AC voltage in the electrical conductor that generates a high-frequency alternating electric field at the surface sufficient to melt ice at the surface.

Contrary to the Examiner's assertion, Petrenko '075 does not teach the elements of claim 1. In the second aspect (2) above, Petrenko '075 specifically requires that the object to be de-iced has a coating [col. 27, lines 62-64] of ferroelectric material which generates heat in the presence of an AC field such as generated by a power line [FIG. 27, col. 27, lines 6-10].

The system of claim 1 does not require a specific coating on the object to be de-iced. Rather, the system of claim 1 discloses that a surface of a cableway to be de-iced is proximate to an electrical conductor carrying the AC field. Since Petrenko '075 does not disclose the elements of claim 1, it cannot anticipate claim 1 under 35 U.S.C. §102.

Claims 2-7, 9-14 depend from claim 1 and benefit from like arguments. Reconsideration of claims 1-7 and 9-14 is thus requested based on the foregoing arguments.

Claim 15 recites a system for melting ice on a cableway system component, and includes the following elements:

a) a first electrical conductor disposed at a distance of about from 0 to 30 cm from the ice, and
b) an AC power source for providing a high-frequency AC voltage in the first electrical conductor so that the AC voltage generates a high-frequency alternating electric field in the ice.

As previously noted, the above referenced second aspect (2) of Petrenko '075 requires a material, disposed on the surface of an object to be de-iced, to generate heat. Note that claim 15 does **not** require such a material, and so the disclosure of Petrenko '075 works in a completely different way then the presently claimed system. Petrenko '075 also does not teach that a conductor disposed at a distance 0-30cm from the ice, as in element b of claim 15.

Claims 16-20, 22-23 depend from claim 15 and benefit from like arguments. Reconsideration of claims 15-20, 22-23 is thus requested based on the foregoing arguments.

Claims 24 recites a method for de-icing a surface of a cableway system component, and has an element of applying a high-frequency AC voltage to an electrical conductor that is located proximate to the surface, to generate a high-frequency alternating electric field that melts ice at the surface. As above, claim 24 does not require a material, on the surface to be de-iced, that absorbs the high-frequency alternating electric field, as in aspect (2) of Petrenko '075.

Claim 25-29 depend from claim 24 and thus benefit from the above arguments. Reconsideration of claims 24-29 are thus requested.

Claim 31 recites a method for melting ice on a cableway system component, including an element of applying a high-frequency AC voltage to a first electrical conductor that is located at a distance of about from 0 to 30 cm from the ice, to generate a high-frequency alternating electric field that melts the ice. As above, claim 31 does not require a material disposed on a surface to generate heat that melts ice, as in Petrenko '075 aspect (2).

Claims 32-38 depend from claim 31, and thus benefit from the above arguments. Reconsideration is thus requested for each of claims 31-38.

In view of the above remarks, Applicants contend that the claims are allowable over Petrenko '075. Reconsideration and allowance of claims 1-7, 9-20, 22-29, and 31-38 are respectfully requested.

Rejections under 35 U.S.C. §103(a)

4. The following is a quotation from the MPEP setting forth the three basic criteria that must be met to establish a *prima facie* case of obviousness.

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or

references when combined) must teach or suggest all the claim limitations. MPEP, §2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

5. Claims 8, 21, 30 and 39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Petrenko '075 in view of U.S. Patent No. 5,555,736 issued to Wills et al. (hereinafter, "Wills"). Respectfully, we disagree. The combination of Wills and Petrenko '075 fails to teach or suggest all of the limitations of the claims, as required under 35 U.S.C. §103. We have discussed above why Petrenko '075 fails to teach elements of independent claims; these claims 8, 21, 30, 39 depend from the independent claims and benefit from like argument.

With respect to Wills, the Examiner states that, "Wills teaches a defrost system for refrigerant coils with an AC phase shift sufficiently less than 360 degrees. It would have been obvious to one having ordinary skill in the art to use the phase shift sufficiently less than 360 degrees..." However, Wills' phase shift is used to define a control relationship (i.e., a measure of the time difference between an input and an output) of a refrigerator/freezer system. The phase shift defines the control stability of the temperature for the refrigerator/freezer system. (col. 7, lines 38-45). Wills does not teach "an AC voltage is applied to two electrical conductors 180 degrees out of phase from each other" as taught in the instant specification (p. 12, lines 11-12) and claims 8, 21, 30 and 39. In the instant application, applying an AC voltage to two electrical conductors 180 degrees out of phase from each other serves to increase alternating electric field (AEF) strength and, thus, capacitive current and Joule's heating within ice, relative to the effects of a single conductor. Wills does not use or teach of increasing AEF strength by using two electrical conductors 180 degrees out of phase. Wills does not even describe the use of an AEF or altering the phase of the AEF. The technology described by Wills is completely different from Applicant's technology; Wills is not even analogous art.

Applicant respectfully requests reconsideration and allowance of claims 8, 21, 30 and 39.

Conclusion

Claims 15 and 31 have been amended to specifically recite "a cableway system component". A period has been added to the end of claim 34. Claims 19, 20, 36 and 37 are amended to correct a minor typographical error. No new matter has been added to the claims with these amendments.

In view of the above Remarks, Applicants have addressed all issues raised in the Office Action dated December 23, 2003, and respectfully solicit a Notice of Allowance. Should any issues remain, the Examiner is encouraged to telephone the undersigned attorney.

Applicants believe no fees are due, however, if any fee is deemed necessary in connection with this Amendment and Response, please charge Deposit Account No. 12–0600.

Sincerely yours,

LATHROP & GAGE L.C.

Date: 3/23/04

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